



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/685,509	10/16/2003	Kenny Lee	BHT-3123-105	5080

7590 10/31/2005  
TROXELL LAW OFFICE PLLC  
SUITE 1404  
5205 LEESBURG PIKE  
FALLS CHURCH, VA 22041

EXAMINER

TRAN, DUE NGOC

ART UNIT PAPER NUMBER

2841

DATE MAILED: 10/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/685,509	<b>Applicant(s)</b> LEE, KENNY	
	<b>Examiner</b> Due N. Tran	<b>Art Unit</b> 2841	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 October 2003.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: Fig. 5 (Specification, page 5, lines 4-5). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Art Unit: 2841

4. Regarding to claim 1, line 5, the phrase "a cooling chip" is vague. For the purposes of the examination, it is assumed that the language is intended to mean that a chip needs to be cooled. Lines 6-7, the claim limitation "the aluminum-extrusion heat sinks fringed near the power supply" is vague because the whole is the power supply. For the purposes of the examination, examiner is interpreted as it can be placed any where in the structure. Lines 2 and 7, the claim limitations "highly effective heat pipe" and "high-effect heat pipe" are vague and indefinite. For the purposes of examination, examiner is therefore broadly reading as any heat pipe.

5. Regarding to claim 2, line 2, the phrase "the aluminum-extrusion heat sinks fringed near the power supply" is redundant and no antecedent, but also vague as for claim 1. Lines 3, the limitation "the heat sink fins exposed to the power supply" is vague because the whole is the power supply.

6. Regarding to claim 3, the limitation "the dispersed heat sink fins" is indefinite. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Art Unit: 2841

7. Claims 1 and 2 are rejected under 35 U.S.C. 102(e) as being anticipated by Zapach et al (US 5,842,514).
8. With respect to claim 1, Zapach discloses an electronic unit comprising a base (Fig. 1, element 52), a circuit board (Fig. 2 element 20) a plurality of aluminum-extrusion heat sink fins (Fig. 2, element 42), a highly effective heat pipe (Fig. 2, element 34), a plurality of aluminum-extrusion heat sinks (Fig. 2, element 18), a panel board (Fig. 1 element 48), an outer decking (Fig. 1 element 50), and a back panel (Fig. 1, element 46), as to compose the power supply, which features in the aluminum-extrusion heat sink fins of the stand-up mode fixed above a cooling chip over the circuit board (Fig. 2), and the high-effect heat pipe connecting the aluminum-extrusion heat sink fins and the aluminum-extrusion heat sinks (Fig. 2). Although Zapach does not particularly specify the power supply on his invention, the power supply is an electronic device. Therefore the electronic unit of Zapach can also be a power supply.
9. With respect to claim 2, Zapach discloses the electronic unit in accordance with claim 1 wherein the aluminum-extrusion heat sinks are fringed near the power supply, with a part of the heat sink fins exposed to the power supply (Fig. 2).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 3 is rejected under 35 U.S.C. 103(a) as being anticipated over Zapach et al (US 5,842,514) in view of Grisham (US 20050011199).

11. As noted above in the rejections under 35 USC 102(e), Zapach discloses the electronic unit in accordance with claim 1, however, Zapach does not disclose expressly wherein the dispersed heat sink fins are installed above and aside the outer decking.

Grisham reference, however, discloses an electronic unit having the dispersed heat sink fins installed above and aside the outer decking (Fig. 2 element 140, 141).

Zapach and Grisham are analogous art because they are from the same field of endeavor (Electronic unit).

At the time of the invention, it would have been obvious to a person of the ordinary skill in the art to add the dispersed heat sink fins above and aside the outer decking to the electronic unit of Zapach.

The suggestion or motivation for doing so would have been obvious in view of teaching of Grisham to increase the heat sink's surface area in order to increase ambient-air cooling effects. By increasing the ambient-air surface contact, heat is dissipated from the electronic component through the heat sink and to the ambient air more efficiently.

Therefore, it would have been obvious to combine Grisham with Zapach for the benefit of increasing the efficiency of heat dissipation from an electronic component to the ambient-air.

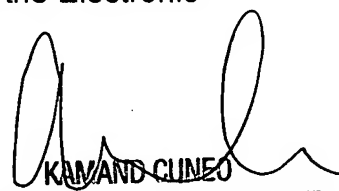
### ***Conclusion***

Art Unit: 2841

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Due N. Tran whose telephone number is (571) 272-5984. The examiner can normally be reached on M-F, 9:30am-6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamand Cuneo can be reached on (571) 272-1957. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
KAMAND CUNEO  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800

DT